

CALIFORNIA'S KEY INDUSTRY CLUSTERS

INTRODUCTION

The California Regional Economies Project (Project) identifies and studies key industry clusters in each of the state's economic regions, looking at both export-oriented and population-driven clusters. These "clusters of opportunity" were selected based on their employment size, annual growth rate, increasing concentration in the region as compared to the national level, and the current and future employment and career opportunities that they offer.

Industry Cluster versus Sector

A cluster is different than a grouping of businesses in the same industry; a cluster is a concentration of companies and industries in a geographic region, which are interconnected by the markets they serve and the products they produce, as well as the network of suppliers and key economic foundation such as research universities, capital, physical infrastructure and labor market.

STATEWIDE

During 2003-04 the Project analyzed data from 1990 through 2002; it is currently analyzing changes from 2002 to 2004. The Project did not study industry clusters of opportunity at the statewide level because, when looking at the data statewide, Southern California skews the results, potentially masking much of the other economic changes taking place around the state. For example, the significance and growth of clusters important to rural areas could be overlooked. Instead, the following list of clusters of opportunity recognizes both metropolitan and rural areas:

- Health Care
- Construction
- Professional and Business Services
- Information Services
- Tourism
- Entertainment
- Transportation and Logistics
- High Tech Manufacturing (computers, semiconductors and electronics)*
- Diversified Manufacturing (apparel, furniture, metalworking, plastics)*
- Resource Industries (agriculture, timber and mining)*

** These industry sectors have not been growing employment but still contribute to the state's GDP and are heavily concentrated in specific regions (e.g., the Bay Area, Southern California and rural regions).*

Based on the Project's economic base analysis, the attachment provides a detailed ranking, by size, concentration and growth rate, of industry clusters in the nine regions.

METROPOLITAN VERSUS RURAL

While some clusters are very important to both metropolitan and rural economies, there are also significant differences:

- The Health Science and Services cluster is growing in all regions; health science (life sciences/biotechnology) is growing mainly in metropolitan areas, while health services are growing in all areas.
- Construction is growing in all areas.
- The Manufacturing Value Chain design and logistics activities are growing, primarily in metropolitan areas, whereas production is declining.
- Resource-based clusters, such as agriculture, timber and mining, are heavily concentrated in rural areas.

EMERGING INDUSTRY CLUSTERS

In 2003-2004, the Project identified and studied three emerging clusters, based on their increasing rate of growth, concentration¹, shift-share² and employment:

- Health Science and Services – this includes life sciences/biotechnology
- The Manufacturing Value Chain: Design–Production–Logistics
- Quality of Life Experiences in Rural California

These clusters and their importance by region are shown below:

Regions	Health Science & Services	Manufacturing Value Chain	Quality of Life Regional Experiences
Northern California	XX		XX
Northern Sacramento Valley	XX		XX
Greater Sacramento	XX	XX	
Bay Area	XX	XX	
San Joaquin Valley	XX	XX	
Central Sierra	XX		XX
Central Coast	XX		XX
Southern California	XX	XX	
San Diego/Border	XX	XX	

Other notable emerging clusters, although not studied in depth by the Project, include:

- Alternate energy; and,
- Nanotechnology.

¹ A higher percentage of the region's employment is found in this cluster than at the national level.

² Employment growth in the region is higher within this cluster than at the national level.

ATTACHMENT

INDUSTRY CLUSTERS OF OPPORTUNITY IN EACH OF THE NINE REGIONS

Northern California Region				
Counties: Del Norte, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Sierra, Siskiyou and Trinity				
Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
All Government*	49,740	1	1	4
Retail Trade	23,760	2	4	6
Health Care and Assistance	18,856	3	3	5
Accommodations and Food Services	17,450	4	2	3
Construction	8,958	5	6	2
Administrative and Waste Services	4,794	6	8	9
Professional and Technical Services	4,177	7	9	7
Arts, Entertainment and Recreation	2,870	8	5	8
Other Services**	5,466	9	7	1
Management of Companies and Enterprises	1,218	10	10	10
<p>* All Government includes federal, state and local employment – from defense, police and firefighters to educators and other public services. The growth in this cluster is found primarily in local government, with significant increases in local education (K–14), including classroom and administrative positions.</p> <p>** Other Services includes automotive repair & maintenance, religious organizations, grant making & giving services, social advocacy organizations, personal care services, professional & similar organizations, death care services, civic & social organizations, dry cleaning & laundry services, other personal services, commercial machinery repair & maintenance, household goods repair & maintenance, and electronic equipment repair & maintenance.</p>				

Northern Sacramento Valley Region				
Counties: Butte, Colusa, Glenn, Shasta, Tehama				
Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
All Government*	37,900	1	2	6
Health Care & Social Assistance	23,200	2	1	4
Retail Trade	22,900	3	3	7
Accommodations and Food Services	14,000	4	6	5
Construction	11,100	5	7	2
Administrative and Waste Services	8,800	6	8	8
Other Services	8,100	7	5	1
Transportation & Warehousing	7,400	8	4	3
<p>* All Government includes federal, state and local employment – from defense, police and firefighters to educators and other public services. The growth in this cluster is found primarily in local government, with significant increases in local education (K–14), including classroom and administrative positions.</p> <p>** Other Services includes automotive repair & maintenance, religious organizations, grant making & giving services, social advocacy organizations, personal care services, professional & similar organizations, death care services, civic & social organizations, dry cleaning & laundry services, other personal services, commercial machinery repair & maintenance, household goods repair & maintenance, and electronic equipment repair & maintenance.</p>				

Greater Sacramento Region

Counties (6): El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba

Industry Clusters of Opportunity (1990-2002)¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
Health & Biomedical	80,945	1	4	5
Visitor Services	80,551	2	3	6
Construction	72,870	3	1	4
Financial, Insurance & Real Estate Services	58,154	4	2	9
Innovation Services	55,890	5	6	2
Miscellaneous Manufacturing	40,211	6	10	7
Agriculture & Food Processing	31,891	7	8	10
Computer, Semiconductor & Electronic Manufacturing	28,568	8	9	1
Information & Telecommunication Services	19,599	9	5	3
Transportation, Logistics & Warehousing	18,139	10	7	8

Bay Area Region

Counties (10): Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

Industry Clusters of Opportunity (1990-2002)¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
Biomedical & Health	330,434	1	7	3
Management, Creative & Business Services	277,918	2	6	7
Computer, Semiconductor & Electronic Manufacturing	220,823	3	1	8
Construction	207,098	4	9	5
Information Services, Telecommunications & Software	199,031	5	2	9
Finance & Insurance Services	189,858	6	8	4
Visitor Services	119,367	7	4	6
Social Services	Not available	8	5	2
Education & Training	72,485	9	3	1
Industrial Machinery	11,430	10	10	10

Central Coast Region

Counties (4): Monterey, San Benito, San Luis Obispo, Santa Barbara

Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
All Government*	93,110	1	3	3
Retail Trade	52,615	2	4	5
Agriculture, Forestry, Fishing & Hunting	52,420	3	1	8
Accommodation & Food Services	49,294	4	2	7
Health Care & Social Assistance	36,783	5	5	2
Construction	22,563	6	6	4
Administrative & Waste Services	19,506	7	9	9
Professional & Technical Services	19,069	8	8	1
Wholesale Trade	12,769	9	10	6
Management of Companies & Enterprises	6,060	10	7	10

* All Government includes federal, state and local employment – from defense, police and firefighters to educators and other public services. The growth in this cluster is found primarily in local government, with significant increases in local education (K–14), including classroom and administrative positions.

San Joaquin Valley Region

Counties (8): Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare

Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
All Government*	254,600	1	1	5
Retail Trade	131,005	2	5	7
Manufacturing	109,882	3	9	9
Health Care & Social Assistance	107,266	4	3	3
Accommodation & Food Services	78,900	5	8	6
Construction	65,238	6	4	1
Administrative & Waste Services	49,244	7	10	10
Transportation & Warehousing	38,348	8	2	4
Other Services	37,300	9	6	2
Management of Companies & Enterprises	19,581	10	7	8

* All Government includes federal, state and local employment – from defense, police and firefighters to educators and other public services. The growth in this cluster is found primarily in local government, with significant increases in local education (K–14), including classroom and administrative positions.

** Other Services includes automotive repair & maintenance, religious organizations, grant making & giving services, social advocacy organizations, personal care services, professional & similar organizations, death care services, civic & social organizations, dry cleaning & laundry services, other personal services, commercial machinery repair & maintenance, household goods repair & maintenance, and electronic equipment repair & maintenance.

Central Sierra Region

Counties (7): Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne

Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
All Government*	18,690	1	2	1
Accommodations and Food Services	10,061	2	1	10
Retail Trade	7,268	3	5	9
Health Care and Social Assistance	4,162	4	8	6
Construction	3,618	5	4	3
Administrative and Waste Services	2,145	6	9	2
Other Services	1,820	7	7	5
Professional and Technical Services	1,525	8	10	7
Arts, Entertainment and Recreation	1,332	9	3	4
Real Estate & Rental Leasing	1,008	10	6	8

* All Government includes federal, state and local employment – from defense, police and firefighters to educators and other public services. The growth in this cluster is found primarily in local government, with significant increases in local education (K–14), including classroom and administrative positions.

** Other Services includes automotive repair & maintenance, religious organizations, grant making & giving services, social advocacy organizations, personal care services, professional & similar organizations, death care services, civic & social organizations, dry cleaning & laundry services, other personal services, commercial machinery repair & maintenance, household goods repair & maintenance, and electronic equipment repair & maintenance.

Southern California Region

Counties (5): Los Angeles, Orange, Riverside, San Bernardino, Ventura

Industry Clusters of Opportunity (1990-2002) ¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
Production (Manufacturing)	963,720	1	3	8
Health & Biomedical	580,987	2	7	3
Professional & Business Services	519,171	3	5	5
Visitor Services	453,349	4	6	4
Construction	376,247	5	8	2
Financial, Insurance & Real Estate Services	365,029	6	4	1
Entertainment & Creative Services	407,823	7	1	7
Logistics & Warehousing	190,080	8	2	6
Software, Programming & Telecommunications	140,164	9	9	9

Southern Border Region

Counties (2): Imperial, San Diego

Industry Clusters of Opportunity (1990-2002)¹	Employment (2002)	Rank by Size	Rank by Concentration	Rank by Growth Rate
Construction & Real Estate	98,000	1	5	3
Biomedical & Health Services	87,200	2	6	2
Information Technologies	48,200	3	3	9
Innovation Services**	45,400	4	2	1
Tourism & Entertainment	45,300	5	4	8
Defense	35,500	6	1	6
Miscellaneous Manufacturing	16,600	7	7	4
Education & Training	16,300	8	8	7
Agricultural Services	15,600	9	10	10
Transportation & Logistics	12,700	10	9	5

* Innovation Services includes architectural and engineering services, specialized design services, management and technical consulting services, and scientific research and development services.